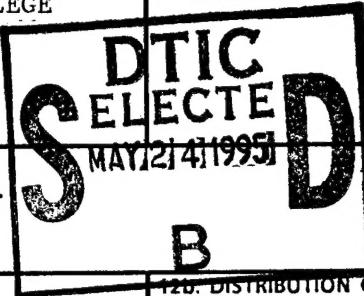


REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE 1987	3. REPORT TYPE AND DATES COVERED	
4. TITLE AND SUBTITLE Abstracts of Masters of Military Art and Science (MMAS) Theses and Special Studies 1986-1987		5. FUNDING NUMBERS	
6. AUTHOR(S) USACGSC, Office of the Director, Graduate Degree Program, 1 Reynolds Ave, Bldg 111, Fort Leavenworth, KS 66027-1352			
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) United States Army Command & General Staff College Graduate Degree Program 1 Reynolds Ave, Bldg 111 Fort Leavenworth, KS 66027-1352		8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) UNITED STATES ARMY COMMAND AND GENERAL STAFF COLLEGE Graduate Degree Program 1 Reynolds Ave, Bldg 111 Fort Leavenworth, KS 66027-1352		10. SPONSORING/MONITORING AGENCY REPORT NUMBER	
11. SUPPLEMENTARY NOTES			
12a. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution is unlimited		12b. DISTRIBUTION CODE	
13. ABSTRACT (Maximum 200 words) This volume brings together all abstracts of Masters of Military Art and Science (MMAS) theses completed at USACGSC from the academic term of 1986-87			
14. SUBJECT TERMS		15. NUMBER OF PAGES	
		16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT Unclassified

**U.S. ARMY COMMAND AND GENERAL STAFF COLLEGE
FORT LEAVENWORTH, KANSAS**

**ABSTRACTS OF MASTER OF MILITARY ART
AND SCIENCE (MMAS)**

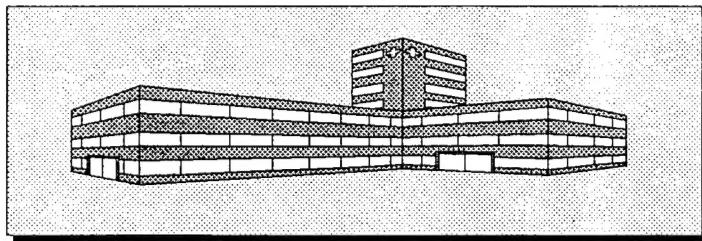
THESES AND SPECIAL STUDIES

**ANNUAL EDITION
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Accession For	
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Availability Codes	
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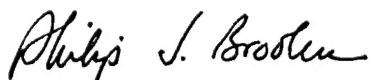
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THE DEGREE
MASTER OF MILITARY ART AND SCIENCE

On 5 August 1974 legislation was enacted authorizing the U.S. Army Command and General Staff College (CGSC) to award the degree, Master of Military Art and Science (MMAS), an authority originally requested in 1964. The legislation prescribes that the MMAS program require a thesis; also, that the College must attain affiliate or member status with the North Central Association of Colleges and Schools prior to the award of any degree. Included in the statute was authority for retroactive awards to the 182 officers who had successfully completed the MMAS requirements in previous years. On 31 March 1976 the College was granted full accreditation as a masters' degree-granting institution by the North Central Association of Colleges and Schools.

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FOR THE COMMANDANT:



PHILIP J. BROOKES
Director
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HOW TO USE THIS BOOK

This edition brings together all abstracts of Master of Military Art and Science (MMAS) theses completed at the U.S. Army Command and General Staff College (CGSC) from 1986-1987. The subject section is designed to fit the areas of research emphasized by the MMAS student. Because of the primary military thrust of the subject matter, headings such as "U.S. Army," "War," or "Combat" have been omitted in favor of more precise captions.

Some titles have been listed in several places in the subject section, as appropriate. The numbers following the subject heading correspond to the titles in the list of theses, by year of completion. Abstracts and the number of pages in the theses are found in the body of the volume.

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An author list is in the back of the volume.

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624. DETERRENCE VERSUS REASSURANCE: IMPLICATIONS OF THE MARITIME STRATEGY FOR NORWAY, by Major Erling Aabakken, Norway, 97 pages.

The purpose of this analysis is to determine the impact on Norwegian security should NATO and the United States apply The Maritime Strategy to operational planning for the Norwegian Sea.

The Maritime Strategy is a global strategy, which in competition for acceptance against the continental-coalition strategy, has to satisfy U.S. needs to counter the Soviet Union. Although much of the "campaign" for The Maritime Strategy has focused on the Norwegian Sea, the goal is global.

The presence of NATO naval forces in the Norwegian Sea has been limited to the STANAVFORLANT and other allied forces during exercises. Recent exercises and force deployment demonstrate that NATO leaders have decided to increase allied presence in northern waters to counter Soviet Naval expansion.

The 600-Ship U.S. Navy, being built as the result of The Maritime Strategy "campaign," gives NATO the possibility to increase NATO presence further and make such an aggressive strategy in this area more credible.

Official Norwegian Security and Defense policy rests on the twin pillars of deterrence and reassurance, and if implemented, The Maritime Strategy has to fit into the constraints made up by these two pillars.

The preference of the Norwegian government seems to be a continuation of the system of previous restraint and confidence building measures to avoid confusion and superpower rivalry in the northern waters.

The study identifies three areas which cause some concern: (1) the horizontal escalation aspect, (2) early strikes against Soviet SSBN's, and (3) peacetime presence within the Norwegian Sea required to assure that The Maritime Strategy, if implemented, will be successful. The Study concludes that the Maritime Strategy is suitable and acceptable from a Norwegian perspective. The main reason is that it contributes to deterrence against the Soviet expansion into the Norwegian Sea, and thereby makes Norwegian security policy more credible.

625. THE OPERATIONAL LEVEL OF EUROTERRORISM: An examination of current terrorist activities directed against NATO and an attempt to explain the coherence of those activities using a campaign plan, by Major Jeffrey W. Anderson, USA, 66 pages.

In the past few years the number of terrorist events and activities throughout the world has increased dramatically. Many of these terrorist actions have been directed against the United States or other members of the NATO Alliance. This increase in terrorism in Western Europe led Victorfranco Pisano to coin the term "Euroterrorism." Further, Claire Sterling examined a number of terrorist activities and through the biographies of well-known terrorists concluded that there was in fact an international conspiracy of terrorism and that the Soviet Union was the controlling nation.

This research examines recent events of Euroterrorism to determine if these seemingly unrelated events have an operational level. This is done by attempting to describe the events of Euroterrorism by a campaign plan as defined in JCS Publication 2. This research finds that in fact terrorist activities in Western Europe do follow a campaign plan and, therefore, have an

operational level. The study further examines the sources of this plan and refutes the work of other authors that accuse the Soviet Union of state directed terrorism. Instead, this paper concludes that the Soviet Union is responsible for state support of terrorism through its surrogates or puppet states, but does not direct the actions of the various European terrorist groups. Likewise, no other state appears to direct their actions. The paper then concludes that the events of Euroterrorism follow essentially national level campaign plans while the various terrorist groups receive support but not direction from external nations. Finally, a derived national campaign plan for the Red Army Faction is presented.

626. THE USE OF USAF TACTICAL AIRPOWER IN REAR AREA BATTLE, by Major Michael J. Atherton, USAF, 71 pages.

Modern day Soviet doctrine dictates that the Warsaw Pact will rely heavily on deep operations into the friendly force's rear area. These attacks, if not successfully identified and countered, could have devastating effects on the friendly forces command and control, logistics support, and main battle effort. This thesis addresses the use of Air Force airpower for the rear battle and how all rear battle assets could be better integrated to counter a Soviet deep strike.

The general conclusion of this study is that tactical airpower (TACAIR) training should be expanded to increase the knowledge of the aircrews in fighting a rear battle. In light of the increasing Soviet emphasis on deep battle, an evaluation should be conducted to determine if current close air support (CAS) training is adequate for the requirements of rear battle.

This study concluded that technology also can be employed to streamline and enhance command and control (C2) between the ground units and the supporting airpower. Additionally, training should be developed to expand the number of ground personnel available to aid in waging rear battle.

627. CHINESE COMMUNIST INTERVENTION IN THE KOREAN WAR: MISCALCULATION OR PROVOCATION? A study of the failure to predict the Chinese Communist intervention in the Korean War, November 1950, by Major August W. Bremer, Jr., USA, 90 pages.

This study is an historical analysis of the Chinese Communist intervention in the Korean War from the perspective of the intelligence available to General Douglas MacArthur prior to the Chinese Communist counteroffensive. It answers whether MacArthur should have known his drive toward the Yalu River would provoke the Chinese Communists' overt military intervention in the Korean War on 25 November 1950.

This thesis considers the significant, credible intelligence available to the various levels of the US military and national intelligence hierarchies. The interpretations of the intelligence and the resulting estimates of Chinese Communist intent significantly affected the national and military policy makers.

The evidence is presented chronologically and is considered on three levels: strategic intelligence, operational intelligence, and tactical intelligence. Strategic intelligence emanated from international and diplomatic sources. Operational intelligence was obtained in the Far East, particularly the People's Republic of China, but not within the boundaries of either North or South Korea. Tactical or battlefield intelligence was the confirmation or repudiation of analyses derived from strategic and operational intelligence.

Prior to MacArthur's final offensive in November 1950, he received sufficient significant and credible intelligence to indicate a Chinese

Communist intent to intervene in the war. MacArthur knew of key national intelligence indicators of a hardening of Chinese national resolve. He had accurate information about the relocation of large numbers of Chinese Communist combat forces to Manchuria and into North Korea. MacArthur also had the battlefield intelligence that clearly indicated Chinese involvement prior to their 25 November counteroffensive. The Chinese Communist intent was clear.

The study concludes that General MacArthur is culpable for his failure or refusal to accept valid Chinese Communist warnings.

628. A COMPARATIVE ANALYSIS OF THE MEDICAL SUPPORT IN THE COMBAT OPERATIONS IN THE FALKLANDS CAMPAIGN AND THE GRENADA EXPEDITION, by Major Thomas E. Broyles, USA, 156 pages.

This study examines the medical support of combat operations by the British in the Falklands campaign of 1982 and by the Americans in the Grenada Expedition of 1983. Recent history portends the increased use of ground combat forces in short duration employments far from logistical bases. These two examples of rapidly deployed land forces are investigated to illustrate the principles and operational concepts of medical support shared in common by both the American and British Armies and needed to support rapidly deployed forces. Medical support by the British in the Falklands and by the Americans in Grenada is analyzed by comparing the two medical support operations with each other and against established principles and operational concepts.

The medical support principles used for this comparative analysis are conformity, proximity, flexibility, mobility, continuity, and control. The medical support operational concepts used include triage, echelons of medical support, elements of combat medicine, patient evacuation, and command and control.

The Falklands campaign points out the highly successful joint medical support provided by the British and the precision with which they planned their medical support operation. It also points out British problems with aeromedical evacuation. The Grenada Expedition illustrates the hazards of precluding medical participation in planning a combat operation and the severe impact on field medical support when a joint operation is poorly coordinated. Both operations reveal the vital role that medical commanders have to play in the timely provision of medical support.

The medical support principles and operational concepts identified are shown to be excellent tools for comparing the two medical support operations studied as well as for planning and executing future medical support of rapidly deployed land forces. The lessons derived from each operation, especially when compared with the lessons of the other, also provide vital answers to questions about how medical commanders can ensure their units are ready to medically support combat operations of rapidly deployed forces.

629. A STUDY OF THE LEADERSHIP DISPLAYED BY LIEUTENANT GENERAL THOMAS JONATHAN JACKSON DURING THE AMERICAN CIVIL WAR, by Major Perry C. Casto, Jr., USA, 157 pages.

Confederate Lieutenant General Thomas J. Jackson is considered one of the greatest tacticians who ever lived. His Valley Campaign of 1862 is a classic example of the effective use of maneuver warfare. While much has been written about Jackson's tactics, very little attention has been paid to his leadership of the soldiers who executed his tactical plans. The United States Army's recent emphasis on maneuver warfare has stressed the importance of leadership in the conduct of such warfare. This study is an analysis of Jackson's military leadership as he commanded units from brigade to corps level in the Confederate Army of Northern Virginia to determine if he met the

requirements of a good leader as those requirements are defined by current US Army doctrine.

The study uses current Army doctrine as the basis to judge the effectiveness of Jackson as a leader. It discusses Jackson's background and its effect on the character of his leadership, the leadership that he displayed during the Civil War, and then compares his actions to current doctrine.

The study concludes that while some of Jackson's actions deviated significantly from today's doctrinally sound leadership practices, in the aggregate his leadership was congruous with current doctrine and contributed to his success as a field commander.

630. THE NAVAL BLOCKADE: A STUDY OF FACTORS NECESSARY FOR EFFECTIVE UTILIZATION, by Lieutenant Commander David T. Cunningham, USN, 131 pages.

The 1986 Joint Staff Officer's Guide, AFCS Pub 1, identifies seven military mission options available to national leaders as possible solutions to deal with international problems. Of these seven options, two specifically involve the use of a naval blockade or quarantine. This study uses historical analysis to derive factors which merit consideration by political and military planners contemplating the employment of a naval blockade as a possible option. The study identifies characteristics which have contributed to the success of past naval blockades and focuses on characteristics that have been common to most successful applications of the naval blockade.

The study analyzes 41 blockades or periods of blockade occurring between 425 B.C. and 1973. The study reviews these blockades in three distinct time periods; prior to 1600, during the age of sail from 1600 to 1860, and during the age of iron and steel from 1866 to 1973. Additionally, two other blockades are reviewed in detail. These include the blockade of the South during the American Civil War and the blockade of Cuba during the Cuban Missile Crisis.

The study identifies 22 characteristics which were common to most blockades. The study also reveals 23 secondary characteristics which were also found to contribute to the success of blockades. Two factors were found to be utilized in virtually all successful blockades. The first of these two characteristics was the use of superior sea power by the blockading forces. The second of these characteristics was the use of operations ashore in conjunction with the blockade. These operations took the form of an invasion by ground forces, air strike, land campaign or the imminent threat that one of these operations might be used successfully. The study also includes a review of potential future trends in operations.

631. THE DIVISION AVIATION BRIGADE: LOGISTIC SUPPORTABILITY IN AIRLAND BATTLE, by Major Freemon R. Donley, USA, 121 pages.

The division aviation brigade offers limitless possibilities for employment on the Airland Battlefield. Because of its inherent capabilities of mobility and flexibility, the division aviation brigade is employed in multiple mission roles in the division's area of operations. But like any combat unit, the division aviation brigade's mission success is irrevocably linked to its logistic supportability.

This study examines the capability of combat service support (CSS) organizations to provide effective support in the areas of Class III (bulk) jet petroleum (JP) fuel and aircraft maintenance to the division aviation brigade in the AirLand battle. It specifically examines the corps support command's (COSCOM) and the division support command's (DISCOM) capabilities to

supply Class III (bulk) fuel and aircraft maintenance to the division aviation brigade in the AirLand battle.

This study concludes that CSS organizations can effectively support the division aviation brigade in AirLand battle. However, there are deficiencies noted in Class III (bulk) JP fuel storage and distribution, and in the density of maintenance personnel assigned to the DISCOM's aircraft maintenance company (AMC) which could potentially degrade the effectiveness of combat service support to the division aviation brigade.

632. THE DEVELOPMENT OF FIRE SUPPORT COORDINATION FOR AMPHIBIOUS OPERATIONS BETWEEN WORLD WARS I AND II, by Major David G. Dotterrer, USMC, 113 pages.

This study examines the efforts of the Marine Corps, in conjunction with the Navy, to develop an effective fire support coordination system for amphibious operations between the World Wars. The focus of the study is on both the intellectual and the practical efforts of the period. On the intellectual side the doctrinal manuals, professional journal articles, and lectures are examined. On the practical side the exercises conducted to experiment with the doctrine are examined. These facts are then analyzed to determine if an effective coordination system was developed. Additionally, the reasons for the status of this system at the start of the war are explored. The study concludes with an examination of the meaning these findings have for current doctrinal developers.

The principal conclusion of the thesis is that an adequate coordination system for fire support in amphibious operations had not been developed prior to World War II. Although a basic system for requesting and adjusting fires had been devised, particularly for naval gunfire, there was no provision for the staff coordination of these fires. There was recognition of the problem in the period immediately prior to World War II, but it was not acted upon until well into the war. Consequently, it took the crucible of war with all its difficulties, to compel the completion of the system.

633. INTERROGATION OF PRISONERS OF WAR IN THE AIRLAND BATTLE, by Major William A. Doyle, Jr., USA, 211 pages.

This study investigates Interrogation of Prisoner of War (IPW) operations by analyzing selected elements of U.S. Army and German Army IPW experiences from World War II, and by comparing these historical practices to current U.S. Army AirLand Battle Doctrine.

The investigation revealed no meaningful differences between German and American IPW doctrine, practices, operational development, and results in World War II. The analysis identified common lessons learned in areas of decentralization, training and personnel inadequacies, and proximity of the interrogation to the point of capture. Historical results confirm specific values and limitations of intelligence information produced by IPW operations.

Historical analysis reveals that, in general, interrogations conducted closer to the time and place of capture tend to collect more information of current intelligence value for close and rear operations. Interrogations more remote from the time and place of capture, however, tend to collect more information of historical or strategic value. Historical analysis also revealed a common tendency to decentralize IPW personnel and operations to lower echelons over time during war. The study found AirLand Battle Doctrine to be conceptually consistent with World War II IPW experience, but organizationally inconsistent with the decentralized trend developed over time.

Using World War II American and German Army IPW experience as a basis, the study concludes that AirLand Battle organization of IPW assets does not

efficiently support the lower-echelon interrogation provided for by the doctrine. The study further concludes that IPW operations generate valuable, timely information for close and rear operations, but not for deep operations such as armored assault. The study also concludes that the Army has apparently centralized the peacetime IPW organization at echelons significantly higher than those which historical experience indicated as most effective in wartime.

The study recommends further investigation to determine if IPW assets provided by current AirLand Battle doctrine and organization will be sufficient to support all anticipated IPW missions. The study also recommends further inquiry to determine if current IPW personnel policies and training programs respond adequately to IPW training and personnel problems identified by historical experience.

634. IS THE AIR CAVALRY TRAINING FOR THE RIGHT MISSIONS? THE 1ST SQUADRON, 9TH CAVALRY, 1ST AIR CAVALRY DIVISION--REPUBLIC OF VIETNAM - 1965 TO 1966, by Major William L. Driver, USA, 173 pages.

The purpose of this study is to determine whether a disparity exists between the doctrinal missions an air cavalry unit trains for in peacetime and the missions it actually performs in combat.

The study presents an overview of what cavalry missions have been historically, as well as the Army's doctrinal definition of what the cavalry mission was in the 1960's. This study also presents the actual missions of an air cavalry squadron as performed in combat.

This study examines the U.S. Army's doctrinal definitions of the air cavalry mission during the 1960's and then compared this definition to the missions which were performed by the 1st Squadron, 9th Cavalry in the Republic of Vietnam.

Research confirms that a disparity did exist between the doctrinal missions and the missions which were performed in combat. Investigation also shows that the cavalry doctrine of the 1960's lacked an applicability to air cavalry units, because the doctrine was almost exclusively based on ground cavalry units. As a result, when the 1/9th Cavalry was deployed into combat it established its own doctrinal employment procedures.

This study concludes that in Vietnam the Army structured most of its combat operations around the limitations of available helicopters rather than on the enemy threat. As a result, the Army began to use the 1/9th Cavalry as just another aviation unit rather than as a cavalry squadron. This thought impacts on today's employment techniques of air cavalry units.

635. THE ARMY IN AMPHIBIOUS WARFARE: A CONTEMPORARY APPRAISAL, by Lieutenant Commander Douglas A. Goepfert, USN, 150 pages.

This study is an examination of the Army's capability to conduct amphibious assault operations. The Army's post World War II experience is reviewed with respect to doctrine, changes in force structure and equipment, and training effort. A doctrinal Army landing force is contrasted with the Marine Air-Ground Task Force and existing Army units to determine the feasibility of actually assembling an Army force. A discussion of the continued viability and utility of amphibious warfare is also included.

The analysis reveals that (1) Army amphibious warfare doctrine is inadequate, (2) Army force structure no longer supports the doctrine, and (3) there are deficiencies in equipment necessary to conduct an amphibious assault.

The study concludes that although the Army has a collateral amphibious assault mission, the Army is neither prepared for, nor interested in, conducting such operations.

636. COMPUTER DRIVEN BATTLE SIMULATIONS: HOW TO INTEGRATE THEM INTO RESERVE COMPONENT TRAINING, by Major Ronald J. Hairston, USAR, 157 pages.

Computer driven battle simulations (CDBSs) must be integrated into Reserve Component (RC) training in such a way that they meet US Army Forces Command (FORSCOM) training requirements while addressing the geographical imbalance of RC maneuver units, training units, and training alignments. This means that although one fielding strategy may work well in one Army area, other Army areas will require different strategies to meet their unique needs. Therefore, a tailored distribution of CDBSs to a combination of RC maneuver units, training units, and battle simulation centers (BSCs) is necessary to counterbalance regional requirements.

This study identifies and recommends solutions to the problems encountered when the Reserve Components (RCs) [Army Reserve and Army National Guard] integrate computer driven battle simulations (CDBSs) into their training. It identifies RC training requirements directed by FORSCOM Regulation 350-2 (change-2, 2 February 1987) and the ability of RC units to operate CDBSs in support of training. The major issues affecting integration of CDBSs into RC training include Corps/Division training Coordination Program (CORTRAIN) alignments; the frequency of future RC training exercises; the ability of RC personnel to operate computerized equipment; the adequacy of training facilities to support CDBS systems; and the distances between RC units, their training organizations, and proposed sites for simulation centers.

Using these issues, four strategies for integrating CDBSs were analyzed in detail. They include the fielding of systems to Active Component (AC) units, to RC Maneuver Area Commands (MACs) and Maneuver Training Commands (MTCs), to RC maneuver units, and to proposed battle simulation centers (BSCs). An examination of these strategies led to a recommendation for fielding Division battle simulation (DBS) and Brigade/Battalion Simulation (BBS) for RC training.

This study concludes that any strategy taken to integrate CDBSs into RC training will have some shortcomings. It ultimately recommends the fielding of systems based on support of mobilization missions; distance between the RC units, their training organizations, and their training facilities; and a reduction of the total number of systems by limiting support of staff training exercises (STXs). This study will be useful to other researchers who need a better understanding of RC training and simulations, or need a systematic model for examining integration of other simulation systems into RC training.

637. THE USE OF MILITARY FORCE TO COUNTER INTERNATIONAL TERRORISM - A POLICY DILEMMA, by Major Edward H. Houle, USAF, 179 pages.

This study examines the use of military force as part of a proactive campaign to counter international terrorism. The study includes an examination of the threat from international terrorism as it has grown from 1968 to the present day. Initiatives by the international community to confront terrorism are reviewed to provide a framework for investigating U.S. counter-terrorist policy. Primary emphasis is placed on actions by the United Nations in this review of international initiatives.

The major portion of the thesis focuses on the development of U.S. counter-terrorist policy and the role of military force in that strategy. The study begins with the Nixon Administration. The review of national policy follows two tracts: the development of a government organization to deal with

the problem and the evolution of the policy itself. With U.S. policy outlined, the study reviews possible options for overt military operations as part of a proactive campaign against international terrorism.

The author found that the threat from international terrorism has increased significantly over the past 15 years. More importantly, state sponsorship has emerged as the most significant threat development since 1980. Actions by the international community, specifically the United Nations, have not successfully met the challenge. further, U.S. policy and organizational development has been marginally effective. Despite this, U.S. policy advocates the use of military force in proactive strikes against terrorism.

The study shows that U.S. policy and organizations must be updated to meet the growth and changing nature of the threat. Military force, to include proactive operations, should be included in this update as an option for U.S. leaders. However, the military option will be applicable in only a few cases. The decision to employ military force must be made very carefully. The execution of that option must then be conducted with clear objectives and under tight control.

638. AN ANALYSIS OF THE PERCEPTIONS OF DIVISION SENIOR COMBAT ARMS LEADERS ON THE TACTICAL COMPETENCE OF DIVISION SIGNAL OFFICERS AND ASSISTANT DIVISION SIGNAL OFFICERS, by Major Paul D. Hughes, USA, 119 pages.

This study is a descriptive analysis of the perceptions of active component division commanding generals, chiefs of staff, and G3s of the tactical competence of their Division Signal Officers (DSOs) and Assistant Division Signal Officers (ADSOs). This study sought to answer four questions: (a) how do division commanding generals, chiefs of staff, and G3s perceive the essentialness of tasks that DSOs and ADSOs should perform; (b) how do divisions' senior leaders perceive the effectiveness of their DSOs and ADSOs in performing the surveyed tasks; (c) what is the difference between the perceived essentialness of the surveyed tasks and the perceived effectiveness of the DSO and ADSO in performing those tasks; and (d) what relationship exists between respondents' duty positions and perceptions of the DSOs' and ADSOs' effectiveness in performing the surveyed tasks.

This study was designed to use a mail survey of all 54 officers in the target population. A list of 20 tasks that tactically competent DSOs and ADSOs should perform was extracted from Field Manual 101-5: Staff Organization and Operations and Field Manual 100-5: Operations. A researcher-development instrument was used to collect data about the perceptions of the essentialness of DSO and ADSO tasks and the effectiveness with which those tasks were being performed by the DSOs and ADSOs. The instrument employed the semantic differential item technique.

Results of this study showed: (a) 18 of 20 tasks used in this survey were perceived as highly essential; (b) the DSOs and ADSOs very effectively performed their tasks; (c) DSOs and ADSOs effectively perform tasks considered essential by division senior combat arms leaders; and (d) a significant relationship ($p=.02$) existed between the respondents' duty positions and their perceptions of performance effectiveness only for one ADSO task.

The study concludes that, if the tasks derived from the doctrinal manuals are accepted indicators of tactical competence, then (a) current DSOs and ADSOs are tactically competent, and (b) DSOs and ADSOs need to be tactically competent in order to provide signal support to their divisions.

639. DEEP ATTACK BY THE LIGHT INFANTRY DIVISION: CAN THE INTELLIGENCE AND ELECTRONIC WARFARE (IEW) SYSTEM SUPPORT IT? by Major Johnie A. McClellon, USA, 92 pages.

This study is an evaluation of U.S. Army intelligence and electronic warfare doctrine's effectiveness when applied to Soviet operational doctrine. As background, the study reviews AirLand Battle doctrine, intelligence and electronic warfare doctrine, and light infantry division intelligence requirements. The study then examines examples of the Ardennes Counter-offensive and the Son Tay Raid to reveal Intelligence and Electronic Warfare system weaknesses. These weaknesses are validated by pitting modern IEW against the German's 1944 deception measures.

The thesis concludes that U.S. Army IEW doctrine cannot support light infantry forces conducting deep battle. The reasons are our doctrine's hypothesis that the Soviets are predictable, overemphasis on intelligence collection capability at the expense of interpretation, and an inherent susceptibility to deception.

The thesis' recommendations are that the Army place more emphasis on the development of interpretative skills in analysts, the devotion of analysts to counter-deception during the estimative process, and to incorporate the Soviets' intent to deceive their adversaries into the army's intelligence and electronic warfare doctrine.

640. REORGANIZATION OF U.S. ARMY COUNTERINTELLIGENCE AND CRIMINAL INVESTIGATIVE FUNCTIONS, BY Major Thomas V. McDonough, USA, 169 pages.

The purpose of this study is to determine whether the conduct of counterintelligence and criminal investigations missions in the military is more effectively accomplished by agencies which control both types of investigative activity, or by those which separate the responsibility for each between two separate elements.

Assuming the continued requirement for the conduct of criminal and counterintelligence investigations, the problem becomes one of how to execute these missions with the maximum degree of effectiveness. The question of how this should be done in the Army has been partially addressed in two prior studies: SECURITY SHIELD in 1964, and again in 1975 in the Intelligence and Organization Stationing Study, or IOSS. The first, while recognizing the need to improve Army investigative efficiency, resulted in no long lasting change in the way the Army performed its investigative missions. The second, the IOSS, only tangentially addressed CI concerns, focusing rather on intelligence collection capabilities. There has been no comprehensive official study of the overall effectiveness of the Army's investigative apparatus in 22 years. This study addresses that issue.

This study suggests that the Army should reappraise the manner in which it has traditionally organized its investigative activities in order to improve their effectiveness. It concludes that systemically, agencies which have combined responsibility for criminal and counterintelligence are more effective than those which manage these areas in isolation from one another. The study recommends specific considerations which should be addressed in order to determine if the benefits of Army conversion to a combined investigations management system outweigh the difficulties associated with such a major reorganization.

641. UNIT COLLAPSE: A HISTORICAL ANALYSIS OF TWO DIVISIONAL BATTLES IN 1918 AND 1944, by Major Thomas Michael McGinnis, USA, 121 pages.

This study seeks to determine the potential causes for unit collapse in combat through a comparison and analysis of two American divisions. The first, the 35th Infantry Division fought in the Meuse-Argonne Offensive in September 1918, in World War I. The second, the 28th Infantry Division collapsed while attacking into the Huertgen Forest in November 1944, during

World War II. Each divisions' performance is examined from activation through disintegration using the available historical records. The analysis of the battles focuses on the collapse of the separate infantry regiments and battalions. The study uses current theories on unit collapse as a basis for this analysis.

It concludes that current theory only partially explains the issues involved. These units collapsed because of a number of interactive forces that began as the divisions prepared for combat. The most important factors involved the interrelationship within the command, control and communications system. This included leadership performance, stability in command, and key personnel casualties. In both cases the tactical employment of the divisions and their communications breakdowns had major adverse impacts. Finally, the negative effects of terrain and the actions of the enemy exacerbated the adverse conditions. Prior combat experience and excessive enlisted casualties were not the primary causes in the majority of regiments analyzed.

642. AMERICAN INTERVENTION IN RUSSIA, 1917-1918: A STUDY IN POLITICAL-MILITARY RELATIONSHIPS, by Major David B. Morgan, USA, 111 pages.

The intervention in Russia in 1918 was a momentous decision in American military and diplomatic history. In the chaotic months between January and July 1918, Wilson developed and implemented America's foreign policy toward the Russian revolution. As Wilson developed America's strategy, Russia was being torn apart first by war, then revolution, and finally civil war. This study examines the interaction between the American civilian and military leaders over the foreign policy decision to intervene in Russia. The focus of the study is on the extent of interaction of the American military leaders with President Wilson and his cabinet in regard to the final decision to intervene in Russia. Secondary sources such as George F. Kennan, David F. Trask, and Betty M. Unterberger are used in conjunction with various memoirs and most importantly Woodrow Wilson's Presidential Papers as edited by Arthur S. Link.

Chapter one provides an insight into the history of Russia prior to the Brest-Litovsk treaty of 1918. This treaty confronted the Allies with a major crisis concerning the removal of the Russian front. The Allies discovered that they could intervene in Russia under the pretext of restoring the Republican government, expelling the Germans, and influencing postwar Russia. The treaty also gave the Allies added leverage to convince the Americans to intervene. A review of the decision of the Wilson administration to intervene in Russia is essential insight in understanding the American policies of the period.

Chapter two concentrates on the political makeup of the American government in 1917-1918. This chapter gives an overview of the key military and political leaders that advised President Wilson on the decision to intervene. This includes their attitudes, concerns, and views, and how these affected their actions. This chapter discusses and analyzes issues such as military amalgamation, military expansion of the war, and priorities on the war front.

Chapter three concentrates on Wilson's attitude toward intervention and how he arrived at the decision to intervene. Allied pressure and influence as it developed is also examined along with the degree of the military's influence over Wilson and the extent of the interaction of the military with the cabinet regarding the intervention. As the crisis neared, the military and civilian leadership constantly changed positions on the intervention question. This chapter develops those positions and explains the final decision made by those leaders in July of 1918.

In conclusion, the study offers a new prospective of the decision to intervene in Russia. This prospective concludes that the military did not significantly affect the overall decision to intervene. The reason for intervention was political, and the conception, force makeup, and mission was directed by the President without significant input from his military advisors. These insights are important for the historian as a means of examining potential relationships affecting a possible future low intensity conflict.

643. LIBERATION MOVEMENTS IN SOUTH AFRICA. Case Study Strategy of the African National Congress: Is Violence a Practical Alternative? by Captain Ndiaye Ibrahima, Senegalese Armed Forces, 128 pages.

South Africa, as a nation, still bases its internal domestic and social policy on race. Color and social origin have divided the society vertically. This situation, needless to say, favored the emergence of a black consciousness; in other terms, a black resistance. In the early stages, non-violence was the form of struggle adopted by black resistance groups. Soon, however, they resorted to armed struggle and violence became a necessity for the black majority.

The purpose of this study is to seek out an answer to the following question: Is violence a practical alternative in fostering a pluralistic democracy within South Africa?

This study is focused on the African National Congress (ANC), the black movement at the forefront of this confrontation with the white minority government. Primarily, emphasis is put on its history, evolution of its strategy from inception till today, and the use of violence in this struggle. Parallel to it, an attempt is also made to examine how the South African government is responding to this situation.

The conclusion suggests that unless substantial concessions are made by the white ruling class, it appears that South Africa will inevitable experience some major social upheaval in the not too distant future.

644. BUILDING ARMIES FOR DEMOCRACY: U.S. Attempts to Reform the Armed Forces of Cuba (1906-1909) and Nicaragua (1927-1933), by Major Freddy L. Polk, USA, 137 pages.

This study is an historical analysis of military reform efforts of the United States Army and Marine Corps in Cuba and Nicaragua, respectively. The study sets these cases in the political context of United States foreign policy and the political culture of the nations involved. Established concepts for the analysis of civil-military relations are employed to determine the reasons for the failure of American attempts to create professional, nonpartisan, apolitical militaries in these nations.

This study concludes that the reform efforts failed because the United States achieved operational rather than institutional change in these nations. Factors contributing to these failures were an inadequate strategy for military reform and the lack of support from indigenous political elite. The study suggests that these shortcomings may have developed, in part, because of an incomplete understanding of the relationship between military and political institutional change.

This research points to the possibility that political and military institutional reforms may need to precede military organizational change, or risk an unintended redistribution of political power. It also raises questions about the pursuit of reform strategies that call for concurrent development of political and military institutions and organizations. Further

questions are raised about the policy implications of incomplete military reform.

645. U.S. ARMY AIRLAND BATTLE COMMAND CONTROL DOCTRINE: SITUATION SERIOUS BUT NOT DESPERATE by Lieutenant Colonel Wayne M. Polster, USA, 197 pages.

This thesis examines the problem of superior command control in support of the tenets of AirLand Battle doctrine. The study uses the historical method of research analyzing the differing command control styles of two World War II commanders in the European Theater: General Heinz Guiderian, Commander, XIX (German) Panzer Corps, and Major General J. Lawton Collins, Commander, VII (U.S.) Corps. Each commander's performance is examined in detail based on available historical records and by focusing on four antithesis in war--certainty-uncertainty, defense-attack, moral-physical, and means-ends.

Among the many conclusions which could be drawn from this investigation are: (1) the critical control functions are the mission and commander's intent, and (2) personal leadership was key in each commander's success. Both commanders stressed mission type orders and regular visits to forward units.

The study concludes that there are four interdependent cardinal principles of superior command control that support the decision maker--the objective, unity of command, simplicity, and decentralization.

646. THE MI-24 HIND: SOVIET ATTACK HELICOPTER CLOSE AIR SUPPORT VS U.S. ARMY AIR ASSAULT DIVISION, by Major Michael R. Rampy, USA, 84 pages.

This study is an unclassified analysis of the capabilities of the Soviet MI-24 series of attack helicopters in the modern role of close air support (CAS). The United States Army Air Assault Division's air defense artillery (ADA) battalion, both equipment and capabilities, is selected as the standard to measure the threat presented by the MI-24 in its new role of close air support.

Among the many conclusions derived from this research study are that the MI-24 HIND attack helicopter has evolved into one of the Soviet military's most dangerous weapons on the conventional battlefield and will dramatically affect the close-in battle; a critical void exists in the air defense artillery equipment capabilities of the Air Assault Division to counter the MI-24 attack helicopter in two critical areas; at night and in adverse weather conditions; and the Soviet Army has progressed beyond the United States Army in doctrinal thought, employment, and integration of the attack helicopter into combined arms operations.

The research study concludes that the Soviet MI-24 attack helicopter poses a critical threat to friendly forces on the modern battlefield. In conjunction with that threat, there exists a serious void in the ability of the United States Army to counter the MI-24 attack helicopter at night and in adverse weather conditions. This void must be rectified before the outbreak of hostilities.

647. COMBAT OPERATIONS IN MOUNTAINOUS TERRAIN -- ARE UNITED STATES ARMY LIGHT INFANTRY DIVISIONS PREPARING PROPERLY?: A historical analysis of the need to conduct specialized mountain operations training, and its relationship to the training requirements for light infantry divisions of the 1980's, by Major Melvin E. Richmond, Jr., USA, 111 pages.

This study explores the experiences of the Army's only World War II era divisional unit designed specifically for employment in mountainous terrain, the 10th Mountain Division. It examines the reasons for its activation, its organization, training, and combat performance. Using this as a historical

precedence, it then analyzes the current training programs for operations in mountainous terrain, drawing parallels between the training of the 10th of 1944 and that of a light infantry divisions of 1987.

Investigation reveals that a rapid deployment force must be ready today to fight in any terrain to which they deploy. With this requirement comes a responsibility to conduct the training necessary for them to fight and win in any of the likely environments. Virtually every contingency area for the United States contains extensive mountain ranges.

Light infantry divisions do not have to be terrain specific in their training, but historical evidence proves the necessity of their being terrain adaptable. Although most divisions currently train in desert, jungle, urban and forested terrain, almost none conduct training in mountainous terrain. The experiences of the 10th Mountain Division and Fifth Army in World War II illustrate the absolute necessity of units training in mountain operations if they are to be successful in combat in mountainous terrain.

This concludes that the Army leadership cannot ignore the peculiar requirements of combat in mountainous terrain. Rapid deployment forces, specifically light infantry divisions, must begin a concerted program of training in mountainous terrain. The problem is identified. Facilities are available for training. The risk of not beginning such a program is too high to ignore the problem any further.

648. LOGISTICS IN DESERT OPERATIONS: LESSONS LEARNED FROM THE NATIONAL TRAINING CENTER (NTC), by Major Frank N. Roberts, U.S. Army, 139 pages.

This study examines the effectiveness of logistical training and doctrine based on lessons learned from the National Training Center (NTC). The research focuses on weaknesses and trends at the battalion level in the areas of trains organization, rations, fuel, ammunition, transportation and maintenance. Effectiveness is measured first by comments from battalion commanders and controllers who have trained at the NTC, and secondly by similar lessons learned in desert combat during the North African Campaign in World War II.

Research reveals that logistics training at unit home station is generally ineffective. Doctrine, specifically Field Manual 71-2J, is sound and provides effective logistical principles for training at battalion level. The shortfall exists in the execution of doctrine as demonstrated in recurring lessons and participants' comments from the NTC. These findings are reinforced by introducing similar errors that occurred in World War II. The study recommends more emphasis by divisions in not only integrating logistics into battalion training, but creating more realistic conditions and standards of logistics tasks. Additionally, the paper recommends a review of the logistical rules of engagement at the NTC to optimize both realism and training in accordance with unit war plans.

649. SPECIAL MILITARY UNITS - SPECIAL LEADERSHIP, by Major Hy S. Rothstein, USA, 119 pages.

This study investigates the leadership qualities required for successful officer leadership of special units such as airborne, ranger, and special forces. The research hypothesis consists of a list of seven leadership qualities derived from analyzing several universally accepted lists of leadership characteristics along with numerous special operations conducted between 1940 - 1980. The study uses the historical method of research to test the hypothesis against three special operations - "Thunderball," "Cisterna," and "Kingpin."

The study concludes that the research hypothesis is valid and that, on the surface, there appears to be no difference from the requirements for leaders of regular units. However, further analysis concludes that the extreme nature of special operations calls for a reciprocal level of quality leadership. Special operations leaders must possess the fullest measure of each leadership quality.

The research also produced several unrelated but important collateral lessons regarding special operations. Characteristics of successful special operations units along with several principles for planning special operations are included in the study. This section was considered significant in view of recent legislation which established the new Special Operations Unified Command.

650. THE CAMPAIGN PLAN -- ELEMENTS AND FORMAT, by Major Thomas P. Ryan, USA, 122 pages.

This study is written under the premise that operational art and campaign planning are lost arts. To recapture the lost art, four historical campaign plans from World War II (TORCH, GRANITE, RENO V and DOWNFALL) and five examples of campaign planning doctrine, written between 1936 and 1953, are analyzed according to thirteen parameters for campaign planning as defined by two recent military theorists (Williamson and Holder).

The purpose of the study is to attempt to expand the campaign planning doctrine contained in Joint Chiefs of Staff Publication O. 2 (JCS Pub. 2), Unified Action Armed Forces. In addition to the thirteen parameters used in the methodology of this research, the author proposes that the historical plans and doctrine contain three additional parameters or elements of campaign planning that are applicable today (timing, inter-theater coordination and projection of forces/resources required). The study concludes by presenting an expanded version of the JCS Pub. 2 campaign plan format and a proposed alternate format based on methods of presentation encountered in the historical documents.

651. SECURITY OPTIONS FOR MALAYSIA IN THE 1990's, by LTC Mohamed Safari bin Abdul Hamid, Malaysian Armed Forces, 129 pages.

Since 1975 there have been considerable changes in Malaysia. Among these are the internal issues of fundamentalism and political bipolarism and external security problems associated with the emergence of a belligerent Vietnam supported by the Soviet Union. Changes in the superpower balance of power in the region and the normalization of relations with the People's Republic of China also impact on Malaysia's security. These changes demand that Malaysia review her security options. Through examining threats to Malaysian security and analyzing the options available to counter those threats, this thesis recommends a security option for Malaysia to adopt in the 1990's.

The author concludes that the best option for Malaysia is a combination of measures to meet both the internal and external threats. To solve internal issues the author recommends a continuation of existing social, economic and political programs that aim at developing national unity, ensuring the equitable growth of each element of Malaysia's multi-ethnic society and breaking away from politics of communalism. Against the external threat the author suggests a strengthening of ties with ASEAN, upgrading Malaysia's own defense capability and increased defense cooperation with traditional Commonwealth allies and regional neighbors.

652. THE PROBLEMS OF PAKISTAN'S NATIONAL SECURITY SINCE 1979: A Study of the external threats, their impact on Pakistan and Pakistan's response to overcome its national security problems since 1979, by Major Salman Beg, Pakistan Army, 113 pages.

This research uses historical and analytical methods to study the nature of the threats posed to Pakistan, the options available to the Soviet Union (due to its occupation of Afghanistan) and India with regard to Pakistan, and evaluates Pakistan's response to the impact of these threats.

The study concludes that the Soviet occupation of Afghanistan since 1979 and the continuing military buildup by hostile India has placed Pakistan in a two-directional threat. The threats pose significant dangers to Pakistan. The threat of a two-front war has emerged, besides the lesser threats of having to contend with subversion and insurgency, a long-duration war for which Pakistan is ill-equipped, and the likelihood of nuclear intimidation by India.

The study also concludes that Pakistan's security environment is precarious given Pakistan's geography, dependence on external support, and a comparatively weak conventional deterrence capability. The study concludes that Pakistan's response to its security problems by stressing diplomatic dialogue as well as modernization of its military is appropriate. However, in order to ensure a self-reliant deterrent capability, the study finally concludes that Pakistan needs to rely on its own resources including keeping open its nuclear option and taking full advantage of its manpower assets.

653. BATTLEFIELD STRESS: PRE-CONDITIONING SOLDIERS FOR COMBAT, by Major Dennis W. Schoeppner, USA, 104 pages.

This study identifies stress-coping techniques which the individual soldier can use to control his responses to battlefield stress, in order to maximize his performance. This is achieved through an examination of past warfare examples, U.S. Army doctrine, and civilian documentary sources of stress-coping techniques. The nature of stress, its signs and symptoms, stressors, casualty rates, and treatment principles are identified and discussed. Coping techniques are analyzed for applicability on the battle-field. The time periods of before, during, and after combat actions are used as a framework for relating coping techniques to their actual use on the battlefield.

The study concludes that history does not provide detailed information about individual stress-coping techniques. Soldiers were not trained to cope with stress. The focus has been centered around neuropsychiatric casualty rates, treatment procedures, and return-to-duty rates of neuropsychiatric casualties. Although U.S. Army doctrine mentions several coping techniques, it lacks sufficient detail to be of practical use to commanders. The civilian sector presents a broad spectrum of coping techniques, but all are not applicable to the battlefield. The environment of the battlefield differs from a civilian environment due to extended periods of time the soldier is exposed to stress, and the high intensity of the battlefield. Of primary importance is the education of soldiers about stress. Every soldier must be able to recognize stress and practice coping techniques that work for him.

654. FIRE SUPPORT EMPLOYMENT IN THE RHINE RIVER CROSSING AT REMAGEN, GERMANY: An evaluation of field artillery doctrine, standing operating procedures, and the actual procedures employed by the III Corps Artillery during the crossing of the Rhine River at Remagen, Germany, 6-20 March 1945, by Major Jeffrey L. Shafer, USA, 92 pages.

This study is an historical analysis of the procedures and doctrine used by the III Corps Artillery during the First US Army's crossing of the Rhine

River at Remagen, Germany. This study examines the actions of III Corps Artillery in the employment, organization for combat, and command and control of artillery units at Remagen. The fire support procedures employed by the field artillery are compared with those prescribed by published doctrine and unit standing operating procedures. This comparison is used to evaluate the adequacy of doctrine and the need for standing operating procedures to supplement the published doctrine. The development of standing operating procedures from lessons learned during earlier combat is examined to show how the doctrine allowed flexibility and standardization that was evident throughout the army. This standardization continues to serve as a model for fire support operations in today's emerging combined arms doctrine.

This study concludes with lessons learned: (1) Centralized command and control of field artillery should be under the headquarters that is best organized to control a large number of units, (2) doctrine and standing operating procedures are useless unless leaders develop and execute plans that are in accordance with the principles established and practiced, (3) the tendency to establish standing operating procedures that violate or contradict doctrine should be avoided, (4) a need for more liaison officers was evident at Remagen as well as through the war and continues to exist today even with improved technology, (5) the redundancy of tasks outlined in doctrine provides the flexibility needed to accomplish the fire support mission during a fast moving battle, and (6) field artillery units should practice several tactical missions and not just the standard mission associated with peace time organizations.

This study concludes that the standardization evident throughout III Corps Artillery was accomplished by prudent use of published doctrine and standing operation procedures. While these procedures were ignored in some instances at Remagen the flexibility necessary for the employment of the field artillery during the battle was provided by this doctrine.

655. TRAINING OF THE AMERICAN SOLDIER DURING WORLD WAR I AND WORLD WAR II, by Major Roger K. Spickelmier, USA, 158 pages.

This study is a historical comparison and analysis of individual infantry training program development of the United States Army during World War I and World War II. Each period is examined using available historical records and by focusing on three areas of program development. The three areas studied are: (1) factors affecting program development, (2) organizations responsible for training, and (3) individual training program development and evolution.

The study identifies similarities and traces the evolution of training programs from the United States' entry in World War I through the development of the final individual training program after victory in Europe in World War II. The study is useful in providing an example of adaptation to change, as shown in the development of training programs of World War I, and an example of improvement to existing programs, as shown in the development of training programs of World War II.

This study concludes that World War II individual training benefited from the experience of the United States Army in World War I. Lessons learned from World War I training development were incorporated in planning during the period between the World Wars and provided the basis for World War II individual training.

656. DELIBERATE RIVER CROSSINGS: HISTORIC EXAMPLES VS CURRENT DOCTRINE: An analysis of deliberate river crossings over three rivers in central Europe in February 1945 to determine if current river crossing doctrine as presented in Field Circular 90-13 is historically sound, by Major David G. Tarbo, USA, 170 pages.

This study is an historical analysis of deliberate river crossings performed by four U.S. Army divisions in February 1945: The Sixth Armored Division, the Eighth Infantry Division, the Eightieth Infantry Division, and the Eighty-Fourth Infantry Division. Each division's performance, based on historical records, is examined. Conclusions are drawn as to the techniques used and reasons why these divisions were able to perform successful river crossings.

Current river crossing doctrine as contained in Field circular 90-13, Counterobstacle and River Crossing Operations, April 1987, is also described and analyzed. This study compares the reasons for success in the historical river crossing operations with the conceptual framework of current doctrine.

The study concludes that current river crossing doctrine as set forth in Field Circular 90-13 is historically sound. However, it found that there are omissions in the current doctrine. These omissions should be corrected prior to republication of Field circular 90-13.

657. THE FEASIBILITY OF A PAN-AFRICAN SECURITY FORCE, by Major Jonathan Ndam Temlong, Nigerian Army, 95 pages.

This study explores the feasibility of a Pan-African security force through an analysis of selected political factors. It examines in historical perspective the issue of a Pan-African security force and the effect of colonialism on the African political system as they relate to the security force question. The study goes beyond the colonial impact and examines geography and certain contemporary political issues including defense agreements, national interests, and the effect of political stability on the establishment of a Pan-African security force.

The author concludes that a Pan-African security force is not presently feasible but could be achieved in the future with the implementation of the recommendations of this study.

658. ARMY ATTACK HELICOPTERS: CAN THEY SURVIVE ON THE AIRLAND BATTLEFIELD, by Major Richard L. Throckmorton, USA, 131 pages.

Both the United States, the Soviet Union and their respective allies have placed a great emphasis on Armored and Mechanized formations as the key to winning a major conflict on a modern battlefield. It is a well recognized fact that the Soviet Union and her Warsaw Pact Allies have a great numerical superiority over the US and NATO forces in these types of equipment. The delay, disruption, and/or destruction of these armored forces has consequently become a paramount concern to US operational planners. The attack helicopter has shown itself to be a formidable force against mechanized forces in war games and operational tests conducted by both the East and the West.

First, this thesis traces the historical development of the attack helicopter and looks at recent military conflicts where it has been used as an effective offensive weapon. From these conflicts, an analysis of both the efficacy and the shortcomings of the attack helicopter as a weapon system has been performed.

Secondly, the thesis examines US attack helicopter doctrine as it might be employed against Soviet and/or Soviet type forces in the context on Soviet ground and air defense systems, which are recognized to be qualitatively and quantitatively superior to those of the US. The examination of Soviet air defenses against helicopters raises many questions as to whether or not US attack helicopters can survive on the modern AirLand Battlefield.

659. THE WAVING OF FLAGS AND TORCHES: A Study of Tactical Communications in the Signal Corps During World War I, by Major Ronald W. Vandiver, USA, 142 pages.

This study assesses the ability of the United States Army's Signal Corps to respond organizationally, technologically, and doctrinally to the changing tactical communication requirements dictated by the character of warfare existing in Europe both at America's entrance into declared war, and its subsequent campaign participations. The study focuses initially on an overview of the Signal Corps from the years of its birth to America's entrance into World War I. Further investigative material is presented to establish the position that the American prewar attitude of noninvolvement contributed to a position of general military unpreparedness, to include major impacts on the Signal Corps and its ability to respond to critical communication needs.

Examination of the Signal Corps during mobilization highlights the difficulties of creating, and then sustaining, a technical force. The acquisition and training of personnel is the remarkable story of the struggle to meet the manpower requirements of the American Expeditionary Forces in France. A critical analysis of the employment of tactical communications in the Second Battle of the Marne and the Meuse-Argonne Offensive then provides the primary research focus for determining the communications equipment and personnel available to an infantry division in the American Expeditionary Forces; and to trace the changes in general doctrine, tactics and equipment as a result of its battle experience.

Research reveals that the Signal Corps' responded adequately to the requirements of providing a force capable of exercising the Army's signaling arm. However, being tested under the strain of combat extended the support capabilities of the tactical signal organizations to their breaking point. The ingenuity of the signal soldier ensured reliable, flexible and timely communications support, but at a great cost of manpower and material.

660. THE USE OF IOWA CLASS BATTLESHIPS IN AN ECONOMY OF FORCE ROLE AS COMMERCE RAIDERS, by LCDR Wayne A. Walters, USN, 132 pages.

This study analyzes the possibility of using Iowa class battleships in an economy of force role as commerce raiders. It used the historical example of the German pocket battleship Admiral Graf Spee as a basis for the study. It analyzed the German raider in order to obtain lessons learned which could be applied to a contemporary situation.

The study then examined the maritime strategy of both the United States and the Soviet Union to determine the use and positioning of their fleets at the outbreak of a global war. It also looked at the size, mission, and military value of the Soviet Merchant Marine. This information was used to develop a possible scenario where an Iowa class battleship could be deployed as a commerce raider and conduct its operations in accordance with international law.

The findings of this study were that it is possible to use an Iowa Class battleship as a commerce raider under a specific set of conditions. It determined also that this may not be the best use of available assets, and suggests the development of a class of ship specifically for commerce warfare.

661. LEADERSHIP IMPLICATIONS OF TECHNOLOGY ON BRADLEY FIGHTING VEHICLE SQUAD LEADERS, by Major Michael B. Weimer, USA, 199 pages.

This study examines leadership challenges presented by one form of high technology. The hypothesis is that the technology of the Bradley Fighting Vehicle (BFV) turret has surpassed the squad leader's ability to perform his

leadership tasks on the AirLand battlefield in a manner which maximizes the BFV's combat potential.

The study first analyzes the evolution of armored infantry doctrine and equipment, and then clarifies the current doctrinal roles of BFV-equipped mechanized infantrymen by contrasting the BFV with the M113 Armored Personnel Carrier. Focusing upon three key aspects of the BFV turret--weapon systems, sighting systems, and command and control--this paper analyzes the effect of the turret upon five critical leadership competencies--tactical/technical proficiency, cohesion, communication, supervision, and decision-making.

The study confirms the hypothesis. Marginal performance in individual (MOS tests) and collective (gunnery, squad drills and tactics) tasks are revealed in TRADOC studies of performance in field exercises in Europe and the NTC. The squad leader experiences serious difficulty achieving balance between mounted (armored infantry) and dismounted (infantry) tasks, and integrating them into combined arms operations. The turret directly challenges the squad leader's ability to accomplish these dual missions, especially during stressful conditions of night-fighting and continuous operations, a problem which prevents the full realization of the BFV's combat potential. Therefore, the squad leader spends more time in the turret, developing his own technical skills to cope with many more complex tactical decisions, rather than with his squad. Personnel turbulence cripples crew proficiency and unit cohesion. Dispersion on the battlefield (allowed by the capabilities of the BFV's weapons and integrated sight unit), and isolation of the squad leader in the turret, also antagonize unit cohesion. The squad leader's supervisory and decision-making abilities are further aggravated by the complexity and frequency of turret-related tasks and a communication overload.

The thesis recommends the Army focus its Armored Family of vehicle and MANPRINT research toward technological improvements which foster and reinforce leadership at the squad level. Early clarification of the most critical tasks which are within the soldier's capability to learn and apply, and which also maximize the vehicles combat potential, is mandatory. The Army should clearly distinguish between mechanized infantry (M113-equipped) and armored infantry (BFV-equipped) roles; and consider the permanent garrison attachment of armored forces at Task Force level.

Finally, the thesis suggests the Army analyze BFV leader performance and focus upon improvements in their selection and training, implement personnel policies which insure unit cohesion, and develop training devices which simulate combat stress and assist information management at squad level.

662. SOVIET AUTOMATED TROOP CONTROL: THE MATHEMATICS FOR DECISION MAKING, by Major James F. White, USA, 124 pages.

This study examines the content of Soviet Automated Troop Control and the environment in which it originated. The study looks at what automated troop control is supposed to do based on its design and its context.

The study finds that while enhanced decision-making speed is one of the most important aspects of automated troop control, there are others as well. Some of these relate to the unique circumstances of the Soviet experience and to the nature of their society. Other aspects, such as the Soviet decision system, which heavily incorporates the use of mathematical calculations, lend precision to Soviet decision-making. This precision is based on Soviet research efforts which seek to pare decision procedures down to the bare essentials.

Soviet operations research efforts provide the core substance of automated troop control. These research efforts aim to overcome the elements

of chance and a battlefield friction in decision-making as much as possible. Soviet automated troop control efforts are cause for concern.

663. AN ASSESSMENT OF POTENTIAL SOVIET RESPONSES TO EVOLVING THEATER NUCLEAR SYSTEMS, by LTC Richard O. Wightman, Jr., 182 pages.

This study focuses on the Soviet perceptions and decision making processes which influence Soviet reaction to US initiatives in modernizing or developing theater nuclear systems.

Beginning with a discussion about the consequences of previous U.S. misperceptions of Soviet intentions, the study supports the need for ongoing analysis of Soviet actions from the Soviet perspective. The Soviet view of the world is examined in terms of Marxist-Leninist ideology, Soviet fears of encirclement and invasion, and the Soviet perception of world power relationships or "correlation of forces."

The effect of Soviet military theory on reactions and responses to the subject of U.S. military developments is assessed, specifically in the areas of military doctrine and military science. The influence of military art is discussed with emphasis on strategy and operational art. The Party political controls on Soviet military matters are described, including a breakdown of the military decision-making process.

Soviet responses to U.S. nuclear weapons initiatives, including the Pershing II, Ground Launched Cruise Missile and Enhanced Radiation Weapons, are discussed in terms of military and political reactions. Soviet use of propaganda is highlighted. The importance of superiority and technology as an integral part of that superiority is examined, as is the Soviet use of "technology transfer."

This study hypothesizes that any Soviet reaction to U.S. action is based upon unique Soviet perceptions which are strongly influenced by Marxist-Leninist ideology, insecurity, military theory, Party bureaucracy, and world correlation of forces.

The findings of this thesis indicate that any US/NATO force modernization initiative which alters the Soviet perception of the correlation of forces in Europe will evoke some form of response. There is no indication, however, that this response will be a mirror image of the U.S. initiative. The thesis concludes with a discussion of the political and military responses the Soviets may undertake.

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